

Montana Department of Natural Resources and Conservation Forested State Trust Lands Habitat Conservation Plan Annual Update

Reporting Period

January 1,
2017-
December 31,
2017



INTRODUCTION

The Montana Department of Natural Resources and Conservation (DNRC) Forested State Trust Lands Habitat Conservation Plan (HCP) is a plan DNRC developed in cooperation with the United States Fish & Wildlife Service (USFWS) to acquire an Incidental Take Permit (Permit) for the Forest Management Program for a 50-year term. In the HCP, DNRC committed to provide the USFWS annual and 5-year monitoring reports for the duration of the plan. The monitoring reports help the two agencies evaluate DNRC's compliance with required measures, and the effectiveness of conservation commitments. This is the sixth annual update, and the reporting period for this update is January 1, 2017-December 31, 2017. According to the results reported in the following sections, DNRC has fulfilled its annual commitments for monitoring and reporting according to HCP Chapter 4 – Monitoring and Adaptive Management (DNRC 2010).

As outlined in Chapter 8 (HCP Implementation), DNRC and the USFWS are required to meet annually. These meetings allow DNRC to present the USFWS with annual updates, evaluate new science, and they foster communication between the two agencies (DNRC 2010).

MONITORING AND ADAPTIVE MANAGEMENT

During development of the HCP conservation strategies, DNRC and the USFWS included commitments to monitor key components of the strategies. The monitoring and adaptive management program provides assurances that the HCP is being appropriately and effectively implemented, and it outlines a course of action if the conservation strategies are not yielding the desired results.

Monitoring

There are two types of monitoring: (1) implementation monitoring and (2) effectiveness monitoring. Implementation monitoring ensures implementation of DNRC's conservation commitments throughout the Permit term. Implementation monitoring represents DNRC's largest monitoring commitment associated with the HCP, and it involves tracking, reporting and evaluating whether the covered activities are being performed in compliance with the HCP requirements. Implementation is primarily documented through project-level HCP checklists and validated through office and field reviews (DNRC 2010).

Effectiveness monitoring typically involves evaluation of a particular conservation commitment or suite of commitments designed to have a desired effect on a target species or resource. This type of monitoring is intensive and requires considerable resources and expertise to conduct data collection and perform related analyses. Effectiveness monitoring for the HCP is fulfilled through a commitment by both DNRC and the USFWS to consider any new relevant research at annual meetings, and through DNRC's commitment to conduct monitoring to evaluate whether management prescriptions and conservation commitments are having the desired effect on the given species.

The monitoring tables in this update summarize both the implementation and effectiveness monitoring that took place during this reporting period. The tables contain information that must be reported annually as described in tables in the HCP Chapter 4 (DNRC 2010). The tables contain abbreviated descriptions of the HCP commitments that DNRC is required to report on annually. For full descriptions of those commitments, please see Chapter 2 of the HCP.

Adaptive Management

Adaptive management is a process whereby conservation commitments and management actions may be changed based on the results obtained from effectiveness monitoring and/or research. This process results in a feedback loop that incorporates improved information into everyday practices. This update serves as a component of the adaptive management process.

HCP CHECKLIST

HCP implementation checklists are the primary tool that DNRC uses to demonstrate and document compliance with HCP commitments. The HCP implementation checklists are macro-enabled spreadsheets that list specific commitments applicable to each field office. The checklists allow forest management staff to verify which commitments are applicable on a particular project, if they are being implemented, and how they are being implemented. The checklists serve as prompts to help ensure that all applicable commitments are considered and applied appropriately on each project. The checklists also aid in organizing, tracking and summarizing commitment application and any necessary allowances. At the end of the reporting period checklist data is compiled into a database that provides summary information required in the annual updates and 5-year reports. Much of the information presented in the following tables was compiled using the checklists and the associated database. There were 33 HCP checklists completed during this reporting period all of which were associated with commercial timber harvest.

GRIZZLY BEAR

DNRC manages state trust lands located in grizzly bear habitat. The following table outlines the annual reporting requirements and results for grizzly bears.

Table 1 Grizzly bear reporting requirements and results

HCP COMMITMENT (Reporting Frequency)	REPORTING REQUIREMENTS	ACCOMPLISHMENTS & RESULTS	HCP Page(s)
GB-PR4 Constructed open roads and minimized road in RMZs, WMZs or avalanche chutes. (allowances reported annually)	HCP Checklist was reviewed on each project. All projects with such construction, and the circumstances, would be reported.	From HCP implementation checklist Number of projects that were reviewed = 33 Number of projects had open road construction in one or more of these areas = 0.	v.2.4-11
GB-PR5 Suspend motorized forest management activities within 0.6 mile of active den sites until May 31	Report active den sites found, including the following information (to the extent it is available): (1) location of the den, (2) when the bear was documented as present and	No active dens were found in 2017.	v.2.4-11

Table 1 Grizzly bear reporting requirements and results

HCP COMMITMENT (Reporting Frequency)	REPORTING REQUIREMENTS	ACCOMPLISHMENTS & RESULTS	HCP Page(s)																		
	by whom, (3) when the bear vacated the site (if known), and (4) a description of activities that were delayed as a result of the den site.																				
GB-RZ6 Granting of Easements – Discourage granting of easements that relinquish DNRC control on roads within grizzly bear recovery zone. (annual and 5 year)	Use HCP Implementation Checklist to Identify Circumstances and Mitigation Associated with the Easement. Annually compile the number of easements granted and associated miles of newly created open roads.	There were 0 reciprocal access agreements reported within grizzly bear recovery zones for 2017.	v.2.4-15																		
GB-ST1(2) Has DNRC installed bear presence signs? Is DNRC maintaining these signs?	Number and locations included in accomplishment report for Stillwater Unit. Provide informal updates on maintenance issues as needed.	Stillwater Unit has 6 mapped sign locations for the Stillwater Block that were reported to the USFWS in 2012. Four signs located at key locations have been installed and maintained on the main block. Signs continue to be maintained and installed as required under the HCP.																			
GB-SC1 Maintain or decrease baseline open road amounts at the administrative unit level. Improve GIS road layer. (annually as needed)	Report open road amounts (tracked with GIS) at the administrative unit level to compare with HCP baseline. GIS data quality and management reported at annual meeting.	Number of projects reviewed when applicable using open road reduction checklists = 5 See Attachment GB-1, which provides information regarding road amounts by road class, unit office and area office during the monitoring period as compared with baseline levels in 2012. <table><tr><td>Unit</td><td>2012 ITP</td><td>2017</td></tr><tr><td>KAL</td><td>17.8</td><td>12.6</td></tr><tr><td>STW</td><td>1.8</td><td>1.7</td></tr><tr><td>CLW</td><td>16.8</td><td>9.5</td></tr><tr><td>MSO</td><td>4.1</td><td>0.0</td></tr><tr><td>HEL</td><td>0.2</td><td>0.1</td></tr></table>	Unit	2012 ITP	2017	KAL	17.8	12.6	STW	1.8	1.7	CLW	16.8	9.5	MSO	4.1	0.0	HEL	0.2	0.1	v.2.4-22
Unit	2012 ITP	2017																			
KAL	17.8	12.6																			
STW	1.8	1.7																			
CLW	16.8	9.5																			
MSO	4.1	0.0																			
HEL	0.2	0.1																			

Table 1 Grizzly bear reporting requirements and results

HCP COMMITMENT (Reporting Frequency)	REPORTING REQUIREMENTS	ACCOMPLISHMENTS & RESULTS	HCP Page(s)
GB-SC4	Report Pits Operated >0.25 Miles From Open Roads in Resting Parcels and Mitigations Applied.	From HCP implementation checklist No minor projects in resting parcels required the use of gravel sources greater than 0.25 miles from an open road during the monitoring period.	
GB-CY4 Has DNRC expedited reduction of open road densities for recovery zone parcels?	Compile and report information from Open Road Reduction Checklist (Appendix B, Document B-2) for all CYE recovery zone parcels (does not include CYE NROH parcels).	Initially completed in 2012.	v.2.4-25

CANADA LYNX

Some forested trust lands managed by DNRC occur within the distribution of Canada lynx, which was listed as threatened in 2000 by the USFWS. The following table outlines the reporting requirements and results for Canada lynx.

Table 2 Canada lynx reporting requirements and results

HCP COMMITMENT (Reporting Frequency)	REPORTING REQUIREMENTS	ACCOMPLISHMENTS & RESULTS	HCP Page(s)
LY-HB1 Lynx Habitat Map – Track lynx habitat in the HCP project area. (annual)	Provide lynx habitat map depicting annual changes and table that includes lynx habitat amounts by type for each administrative unit and LMA.	Results are provided for year 2017 in Habitat tables found in Attachment L-1 and L-2. Total potential habitat overall has decreased by 3,570 acres on non-LMA lands since the baseline habitat data run conducted in 2012. This decrease is primarily due to correction of a habitat model error applicable to the Central Land Office where approximately 3,133 acres of non-forested habitat were removed. Data for all land offices are presented in Attachment L-2.	v.2.4-29
LY-HB6 Maintain 65/35% ratio of suitable/non-	Report acres and percentage of total potential lynx habitat,	CLO = 27,302 ac; 79% suitable NWLO = 55,652 ac; 85% suitable SWLO = 19,838 ac; 80% suitable	v.2.4-32

HCP COMMITMENT (Reporting Frequency)	REPORTING REQUIREMENTS	ACCOMPLISHMENTS & RESULTS	HCP Page(s)
suitable habitat on scattered parcels outside of LMAs. (year 2 and 5)	suitable lynx habitat and temporary non-suitable habitat on scattered parcels outside the LMAs for each land office	See lynx habitat table Attachment L-2.	

AQUATICS

The aquatic conservation strategies were developed by DNRC with the technical assistance of the USFWS. The process was initiated by identifying a specific biological goal applicable to the three HCP fish species. The identified biological goal was to protect bull trout, westslope cutthroat trout and Columbia redband trout populations and their habitat and to contribute to habitat restoration or rehabilitation, as appropriate, which may have been affected by past DNRC forest management activities. Commitments were developed to address known scientific information and uncertainties in scientific knowledge, as well as existing data gaps (DNRC 2010). The following table outlines the reporting requirements and results for the Aquatics Conservation Strategy.

Table 3 Aquatics reporting requirements and results

HCP COMMITMENT (Reporting Frequency)	REPORTING REQUIREMENTS	ACCOMPLISHMENTS & RESULTS	HCP Page(s)
AQ-RM (1) Riparian Management Zone Commitments. (annual)	Complete HCP Implementation checklist review on all sites.	During 2017, RMZs were delineated on 17 projects containing Class 1 streams or lakes. 10 of these projects include harvest plans for a total of approximately 74.7 acres of RMZ harvest.	v. 2.4-39
AQ-RM (2) Thresholds for RMZ harvest allowances. (annual and 5 year)	Acres of Class 1 RMZ, Acres of Class 1 RMZ harvest under allowances, and RMZ area in non-stocked or seed/sapling size class, by aquatic analysis unit (AAU).	A total of 74.7 acres of the managed portion of the RMZ were harvested in 2017. Allowances were invoked on 3 projects for a total of 23.5 acres. Allowance #2: 6.5 acres Allowance #3: 17 acres Percent total non-stocked, seedling-sapling size class/AAU: Bitterroot: 32.7% Blackfoot: 2.5% Flathead Lake: 8.7% Lower Clark Fork: 0.0% Middle Clark Fork: 5.7% Lower Kootenai: 11.1% Middle Kootenai: 3.3% Upper Kootenai: 6.0%	v. 2.4-39

Table 3 Aquatics reporting requirements and results

HCP COMMITMENT (Reporting Frequency)	REPORTING REQUIREMENTS	ACCOMPLISHMENTS & RESULTS	HCP Page(s)
		North Fork Flathead: 22.0% Rock Creek: 6.9% Stillwater: 4.1% Swan: 3.4% Upper Missouri: 5.9%	
AQ-SD Implement sediment delivery reduction commitments. (annual)	Amount of new road constructed, reconstructed, relocated, abandoned and reclaimed.	See attachment SD-1 on page 17.	v.2.4-40
AQ-FC 1/6 of sites in need of corrective actions implemented, planned or designed every 5 years. All priority 1 sites completed within 15 years. All sites completed with 30 years. (annual and 5 year)	Maintain planning schedule and report accomplishments.	DNRC completed a preliminary inventory of stream crossing sites in 2006 and the results were reported in HCP/EIS. The original HCP baseline included 106 inventoried stream crossing sites in need of corrective actions. To date, 35 new sites have been added to the inventory for a total of 141 crossing sites. Currently, 60 sites have been removed from the planning schedule (See Aquatic Attachment #4 – HCP Fish Connectivity Implementation Monitoring). This includes 19 sites where corrective actions have been implemented. There are 81 sites remaining in need of corrective actions or assessment. The HCP 5- year target requires DNRC to address 1/6 of the sites in need of corrective actions (17 total sites) by 2017. The five-year goal has been achieved, and only one Priority 1 site remains in need of corrective actions.	v.2.4-41
AQ-GZ Implement grazing conservation strategies for grazing licenses on classified forest lands. (annual)	Update status of grazing evaluations and verifications completed, and corrective action implemented.	For the 2017 monitoring period, 65 grazing evaluations were completed on HCP parcels. Of these evaluations, 16 (25%) support an HCP fish species. During the review of grazing evaluation data, 5 parcels (7%) showed evidence that further verification was necessary.	v.2.4-41

Table 3 Aquatics reporting requirements and results

HCP COMMITMENT (Reporting Frequency)	REPORTING REQUIREMENTS	ACCOMPLISHMENTS & RESULTS	HCP Page(s)
		On-site verification by a resource professional of these sites flagged for verification concluded that no further action was warranted on 4 these parcels for various documented reasons. The remaining parcel has a correction action planning for implementation in the spring of 2018 to passively improve streambank stability. For a summary of inspections see Attachment AQ-GZ; Annual Summary Statistics of Grazing Verifications and Corrective Actions.	
AQ-Cumulative Watershed Effects (CWE) Has DNRC implemented the CWE commitments? (annual and 5 year)	Report number, type and location of CWE analysis completed. Provide documentation of mitigation measures or alternatives developed for projects with moderate or high CWE risks.	CWE analyses were completed for 18 forest management projects during 2017. For 11 of these projects a Level 1 CWE analysis (coarse filter) was determined to be sufficient level of analysis due to determination of low risks. More detailed analysis (Level 2 and level 3) were completed on the other 7 projects where the CWE Coarse filter analysis determined that there was potential for moderate to high levels of risk.	v.2.4-41
Assess the potential Large Woody Debris (LWD) recruitment and determine whether in-stream LWD targets will be met on five or more riparian harvest sites. (annual and 5 year)	Annual update will consist of a summary of the status of all monitoring activities.	DNRC has completed pre- and post-harvest LWD monitoring on 13 sites under SMZ/RMZ harvest prescriptions. Post-harvest LWD levels met or exceeded targets at all sites. In 2017, one new site was added to the monitoring program. A synthesis report of completed RMZ monitoring sites is available upon request.	v.2.4-42
Evaluate levels of in-stream shade retained after riparian harvest. (annual and 5 year)	Annual update will consist of a summary of the status of all monitoring activities.	DNRC has completed pre- and post-harvest instream cover monitoring on 12 sites under RMZ/SMZ harvest prescriptions. Post-harvest shade monitoring indicates that current management is adequate to maintain suitable stream temperature regimes for	v.2.4-42

Table 3 Aquatics reporting requirements and results

HCP COMMITMENT (Reporting Frequency)	REPORTING REQUIREMENTS	ACCOMPLISHMENTS & RESULTS	HCP Page(s)
		HCP-covered fish species. In 2017, one new site was added to the monitoring program. A synthesis report of completed RMZ monitoring sites is available upon request.	
Monitor stream temperatures to evaluate if levels of in-stream cover are adequate to maintain stream temperatures. (annual and 5 year)	Annual update will consist of a summary of the status of all monitoring activities.	DNRC has completed pre- and post-harvest stream temperature monitoring on 11 sites under RMZ/SMZ harvest prescriptions. Post-harvest monitoring indicated that 9/11 sites met thresholds identified in the HCP. Two sites did not meet the chronic threshold, while one site did not meet the acute threshold. A monitoring report synthesizing stream temperature data is available upon request.	v.2.4-42
BMP Audits on all applicable projects. (annual and 5 year)	Annual update will consist of a summary of the status of all monitoring activities.	Internal BMP audits were conducted on 6 timber sale projects during 2017. Results of the internal audits found that BMPs were properly applied on 98% of the practices rated. BMPs were effective in protecting soil and water on 99% of the practices rated. One major departure for effectiveness was noted on one timber sale regarding skid trail operations minimizing impacts to soil compaction and displacement. No sediment delivery to any water body was noted.	v.2.4-43
Timber sale inspections on all applicable projects. (annual and 5 year)	Annual update will consist of a summary of the status of all monitoring activities.	During 2017, 605 timber sale inspections were completed on 62 ongoing timber sale projects within HCP project area. Examples of inspection reports are available upon request.	v.2.4-43
Ongoing quantitative studies at two sites. (annual and 5 year)	Annual update will consist of a summary of the status of all monitoring activities.	Pre-harvest turbidity data was collected on the Limestone West Timber Sale project area. Projected implementation date in summer of 2019. Pre-corrective action turbidity data is also being collected on a road-stream crossing site on South Woodward Creek (Swan unit). BMP maintenance is scheduled for the	v.2.4-43

Table 3 Aquatics reporting requirements and results

HCP COMMITMENT (Reporting Frequency)	REPORTING REQUIREMENTS	ACCOMPLISHMENTS & RESULTS	HCP Page(s)
		summer of 2019.	
Case studies monitoring the effectiveness of corrective actions in reducing sediment from existing sources. (annual and 5 year)	Annual update will consist of a summary of the status of all monitoring activities.	The South Woodward turbidity monitoring project is on-going with pre-corrective action data collection. Corrective actions to address BMP maintenance is scheduled for the summer of 2019 which will provide two years of pre-corrective action data.	v.2.4-43
Determine if fish connectivity corrective actions are effective. (annual and 5 year)	Annual update will consist of a summary of the status of all monitoring activities.	Fish connectivity improvements have been completed on 19 fish passage structures covered under the HCP. DNRC has completed 2-year, and 5-year effectiveness monitoring on all sites. One corrective action was identified and completed on a structure, all other sites met effectiveness thresholds.	v.2.4-43
AQ-GR1 Redd Trampling Pilot Study. (Develop and finalize plan by year 2, implement plan by year 3)	Complete a plan for Redd trampling pilot study by year 2.	Initial redd-risk assessment identified 135 classified forest grazing parcels containing stream segments with HCP-covered species present. Redd-risk were assigned to 98% of the parcels, with 45 total parcels identified for potential corrective actions. Three remaining parcels will be assessed in 2018.	v.2.8-9

TRANSITION LANDS STRATEGY

The purpose of the transition lands strategy is to describe the process for moving DNRC lands into or out of the HCP project area. The strategy ensures adequate levels of conservation for HCP species while allowing DNRC to meet its land management and fiduciary trust obligations. This subsection summarizes land transactions within two cap types (5% and 10%) from the period between January 1, 2017 and December 31, 2017. According to the HCP, DNRC will cap the removal of HCP project area lands in the NCDE and CYE grizzly bear recovery zones, CYE NROH, LMAs, and bull trout core habitat areas to 5% of the baseline of the original HCP project area. Additionally, DNRC would cap the removal of all other HCP lands at 10 to 15% of the original HCP project area. Since acres obtained through the Montana Working Forests Project have not yet been added to the HCP project area, the 10% cap applies.

Land Dispositions

No HCP project area lands were disposed of in 2017. DNRC will be well within the cap described above.

TRAINING

Training DNRC staff responsible for implementing the HCP timber sale planning, design and administration is critical to ensure correct and consistent implementation of HCP commitments.

Implementation Training for this Reporting Period

The following training took place during the reporting period and will continue as the HCP progresses forward.

Bear Avoidance Training

A web-based approach to satisfy GB-PR1 was approved by the USFWS and in place July 30, 2013. All staff that normally, or occasionally, perform duties associated with HCP-covered activities viewed the training video hosted on the DNRC employee intranet. Over 161 employees have viewed the video and registered to date. Seventeen new employees to DNRC viewed the training material in 2017. A database is monitored by FMB staff to ensure compliance with GB-PR1 “employees trained on bear avoidance”.

Project-level Training

Project-level training occurs on a regular basis. Forest Management Bureau and Land Office Specialists participate on all Interdisciplinary Teams (ID) for projects in the HCP planning area. These Specialists are very familiar with the HCP and the conservation commitments. Many of them have served on the HCP Workgroup. This has made project-level training one of the most effective training tools for DNRC field staff. Questions arise on a project that might never surface in a classroom training session. Project-level training is ongoing and will continue to be a primary training method.

CHANGED CIRCUMSTANCES

The processes for responding to Changed Circumstances are described in Chapter 6 of the HCP. The USFWS and DNRC are required to ensure changed circumstances are identified and planned for in the HCP. Changed Circumstances may be a result of administrative changes, natural events or a natural disturbance. (DNRC 2010)

There were no Changed Circumstances during this reporting period.

ADJUSTING FOR NEW RESEARCH

DNRC and USFWS are required to exchange any new relevant research or emerging science annually and at the 5-year review. Both parties cooperatively determine if the new information will warrant changes to commitments or management actions.

SUMMARY

The DNRC has successfully met the requirements for sixth year implementation and monitoring.

REFERENCES

DNRC. 2010. Montana Department of Natural Resources and Conservation Forested State Trust Lands Habitat Conservation Plan: Final EIS, Volume II, Forest Management Bureau, Missoula, Montana.

Attachment GB-1: Miles of Road in Various Grizzly Bear Management Areas

2012 HCP BASELINE DATA - DNRC Lands in the HCP Project Area									
Land Offices and Unit Offices in Recovery Zones (Scattered or Blocked Status)	Linear Miles of Road in Recovery Zones						Area		Road Density* (mi/mi ²)
	Open Roads	Restricted Roads	Seasonally Restricted Roads	Abandoned	Reclaimed	Total*	Total Area (mi ²)	Acres	
NWLO	187.6	479.9	12.1	19.6	8.9	679.6	227	145,262	3.0
Kalispell Unit NCDE (Scattered)	14.6	28.2	0.0	2.6	0.0	42.8	10	6,465	4.2
Libby Unit CYE (Scattered)	0.0	8.2	0.1	0.4	0.2	8.3	4	2,848	1.9
Plains Unit CYE (Scattered)	6.0	8.5	0.0	0.1	0.0	14.5	5	3,308	2.8
Stillwater Unit NCDE (Blocked)	122.0	227.4	6.7	9.1	3.8	356.1	141	90,512	2.5
Stillwater Unit NCDE (Scattered)	2.0	11.1	0.0	0.0	0.0	13.1	4	2,474	3.4
Swan Unit NCDE (Blocked)	43.0	196.5	5.4	7.4	4.9	244.9	62	39,656	4.0
SWLO	19.9	23.0	0.0	3.6	1.0	42.9	11	7,229	3.8
Clearwater Unit NCDE (Scattered)	15.7	21.4	0.0	3.6	1.0	37.1	7	4,779	5.0
Missoula Unit NCDE (Scattered)	4.2	1.6	0.0	0.0	0.0	5.8	4	2,450	1.5
CLO	0.2	0.3	0.0	0.0	0.5	0.5	1	639	0.5
Helena Unit NCDE (Scattered)	0.2	0.3	0.0	0.0	0.5	0.5	1	639	0.5

* Does not include Abandoned or Reclaimed Roads

2012 HCP BASELINE DATA - DNRC Lands in the HCP Project Area									
Land Offices and Unit Offices in Non Recovery Occupied Zone (Scattered or Blocked Status)	Linear Miles of Road in Non Recovery Occupied Zones						Area		Road Density* (mi/mi ²)
	Open Roads	Restricted Roads	Seasonally Restricted Roads	Abandoned	Reclaimed	Total*	Total Area (mi ²)	Acres	
NWLO	101.2	141.2	3.0	12.3	6.9	245.3	59	37,715	4.2
Kalispell Unit NCDE (Scattered)	17.9	9.0	0.0	0.3	2.1	27.0	9	5,950	2.9
Libby Unit CYE (Scattered)	23.3	49.0	1.2	0.0	0.0	73.4	15	9,856	4.8
Libby Unit NCDE (Scattered)	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0.0
Plains Unit CYE (Scattered)	8.7	2.6	1.8	0.0	0.0	13.1	4	2,269	3.7
Plains Unit NCDE (Scattered)	3.7	9.7	0.0	1.2	0.0	13.4	4	2,813	3.0
Stillwater Unit NCDE (Scattered)	47.6	70.9	0.0	10.8	4.9	118.4	26	16,826	4.5
SWLO	66.4	188.2	0.4	39.2	1.0	255.0	64	41,314	4.0
Anaconda Unit NCDE (Scattered)	6.7	14.4	0.0	0.0	0.0	21.2	9	6,011	2.3
Clearwater Unit NCDE (Scattered)	59.6	173.8	0.4	39.2	1.0	233.8	54	34,672	4.3
Missoula Unit NCDE (Scattered)	0.0	0.0	0.0	0.0	0.0	0.0	1	631	0.0
CLO	10.2	68.2	0.1	7.3	1.9	78.5	53	33,717	1.5
Bozeman Unit GYE (Scattered)	5.0	6.0	0.1	0.0	0.0	11.0	13	8,129	0.9
Dillon Unit GYE (Scattered)	1.5	51.9	0.0	6.7	0.0	53.4	31	19,627	1.7
Helena Unit NCDE (Scattered)	3.8	10.3	0.0	0.6	1.9	14.1	9	5,961	1.5

* Does not include Abandoned or Reclaimed Roads

2012 HCP BASELINE DATA - DNRC Lands in the HCP Project Area									
Land Offices and Unit Offices outside Grizzly Bear Zones (Scattered Status)	Linear Miles of Road in Non Grizzly Bear Designated Areas						Area		Road Density* (mi/mi ²)
	Open Roads	Restricted Roads	Seasonally Restricted Roads	Abandoned	Reclaimed	Total*	Total Area (mi ²)	Acres	
NWLO	279.7	284.6	2.9	15.8	11.5	567.2	136.0	87,358	4.2
Kalispell Unit	110.4	71.9	0.0	9.8	10.9	182.3	44.0	27,980	4.2
Libby Unit	29.2	75.6	0.3	0.0	0.0	105.1	24.0	15,341	4.4
Plains Unit	140.1	137.1	2.5	6.1	0.7	279.7	69.0	44,036	4.1
SWLO	232.2	378.5	10.1	66.5	9.2	620.9	176.0	112,436	3.5
Anaconda Unit	78.2	63.4	0.0	2.0	0.8	141.6	61.0	38,760	2.3
Clearwater Unit	29.3	31.5	0.0	1.3	0.0	70.1	12.0	7,698	5.8
Hamilton Unit	36.3	98.9	9.8	46.9	6.4	145.0	36.0	22,820	4.1
Missoula Unit	88.4	175.5	0.4	16.3	2.1	264.2	67.0	43,157	3.9
CLO	44.9	142.8	1.9	13.1	1.7	189.6	122.4	78,358	1.5
Bozeman Unit	6.0	21.0	1.6	0.8	0.0	28.5	13.0	8,363	2.2
Dillon Unit	20.1	100.7	0.3	12.2	1.5	121.1	79.0	50,474	1.5
Helena Unit	18.8	21.2	0.0	0.0	0.2	40.0	31.0	19,520	1.3

* Does not include Abandoned or Reclaimed Roads

2017 HCP Annual Report - DNRC Lands in the HCP Project Area									
Land Offices and Unit Offices in Recovery Zones (Scattered or Blocked Status)	Linear Miles of Road in Recovery Zones						Area		Road Density* (mi/mi ²)
	Open Roads	Restricted Roads	Seasonally Restricted Roads	Abandoned	Reclaimed	Total*	Total Area (mi ²)	Acres	
NWLO	165.2	495.6	12.7	18.7	23.1	673.5	226	145,240	3.0
Kalispell Unit NCDE (Scattered)	11.8	31.0	0.0	2.6	0.3	42.8	10	6,458	4.3
Libby Unit CYE (Scattered)	0.0	6.9	0.1	0.4	1.2	7.0	4	2,846	1.7
Plains Unit CYE (Scattered)	5.6	5.9	0.0	3.1	0.0	11.6	5	3,319	2.3
Stillwater Unit NCDE (Blocked)	103.8	251.5	6.7	12.5	13.4	362.0	141	90,480	2.6
Stillwater Unit NCDE (Scattered)	1.7	11.7	0.0	0.0	0.0	13.4	4	2,481	3.4
Swan Unit NCDE (Blocked)	42.3	188.5	5.9	0.1	8.2	236.7	62	39,656	3.8
SWLO	9.5	18.2	0.0	4.4	1.5	27.7	7	5,102	4.0
Clearwater Unit NCDE (Scattered)	9.5	18.2	0.0	4.4	1.5	27.7	7	4,782	4.0
Missoula Unit NCDE (Scattered)	0.0	0.0	0.0	0.0	0.0	0.0	0	320	N/A
CLO	0.1	0.2	0.0	0.0	0.7	0.3	1	639	0.3
Helena Unit NCDE (Scattered)	0.1	0.2	0.0	0.0	0.7	0.3	1	639	0.3

* Does not include Abandoned or Reclaimed Roads

2017 HCP Annual Report - DNRC Lands in the HCP Project Area									
Land Offices and Unit Offices in Non Recovery Occupied Zone (Scattered or Blocked Status)	Linear Miles of Road in Non Recovery Occupied Zones						Area		Road Density* (mi/mi ²)
	Open Roads	Restricted Roads	Seasonally Restricted Roads	Abandoned	Reclaimed	Total*	Total Area (mi ²)	Acres	
NWLO	109.5	155.9	1.3	12.5	12.0	266.7	58	37,733	4.6
Kalispell Unit NCDE (Scattered)	22.1	9.7	0.1	0.3	2.2	31.9	9	5,978	3.5
Libby Unit CYE (Scattered)	23.4	56.5	1.2	0.0	0.2	81.1	15	9,838	5.4
Libby Unit NCDE (Scattered)	0.0	0.0	0.0	0.0	0.0	0.0	0	-	N/A
Plains Unit CYE (Scattered)	7.9	10.7	0.0	0.2	0.7	18.7	4	2,286	4.7
Plains Unit NCDE (Scattered)	8.0	5.4	0.0	1.2	0.0	13.5	4	2,792	3.4
Stillwater Unit NCDE (Scattered)	48.0	73.6	0.1	10.9	8.9	121.7	26	16,839	4.7
SWLO	41.7	235.5	0.4	37.9	6.3	277.7	63	40,715	4.4
Anaconda Unit NCDE (Scattered)	1.3	34.5	0.0	1.6	1.9	35.9	9	6,011	4.0
Clearwater Unit NCDE (Scattered)	40.4	201.0	0.4	36.3	4.4	241.8	54	34,683	4.5
Missoula Unit NCDE (Scattered)	0.0	0.0	0.0	0.0	0.0	0.0	0	21	N/A
CLO	16.9	69.5	1.0	0.6	7.9	87.4	53	33,696	1.6
Bozeman Unit GYE (Scattered)	5.9	12.5	0.0	0.0	0.4	18.5	13	8,140	1.4
Dillon Unit GYE (Scattered)	4.8	51.5	1.0	0.0	0.6	57.3	31	19,626	1.8
Helena Unit NCDE (Scattered)	6.1	5.5	0.0	0.6	6.9	11.6	9	5,930	1.3

* Does not include Abandoned or Reclaimed Roads

2017 HCP Annual Report - DNRC Lands in the HCP Project Area									
Land Offices and Unit Offices outside Grizzly Bear Zones (Scattered Status)	Linear Miles of Road in Non Grizzly Bear Designated Areas						Area		Road Density* (mi/mi ²)
	Open Roads	Restricted Roads	Seasonally Restricted Roads	Abandoned	Reclaimed	Total*	Total Area (mi ²)	Acres	
NWLO	242.2	351.4	3.2	26.2	14.8	596.8	137	87,354	4.4
Kalispell Unit	93.6	108.2	0.0	9.8	10.9	201.8	44	27,976	4.6
Libby Unit	32.9	78.0	0.1	0.0	0.0	111.0	25	15,692	4.4
Plains Unit	115.7	165.2	3.1	16.4	4.0	284.0	68	43,686	4.2
SWLO	134.0	457.7	11.3	81.7	11.7	602.9	171	109,239	3.5
Anaconda Unit	15.4	129.0	0.0	13.4	2.1	144.4	60	38,227	2.4
Clearwater Unit	17.8	32.5	5.0	5.4	1.4	55.3	10	6,391	5.5
Hamilton Unit	30.2	104.0	3.9	51.1	6.2	138.1	34	21,852	4.1
Missoula Unit	70.6	192.1	2.3	11.7	2.1	265.1	67	42,769	4.0
CLO	73.1	96.8	2.8	8.3	9.2	172.7	123	78,874	1.4
Bozeman Unit	15.4	12.7	1.6	0.0	2.2	29.6	13	8,367	2.3
Dillon Unit	33.7	84.1	1.2	8.3	6.8	119.0	80	50,997	1.5
Helena Unit	24.0	0.0	0.0	0.0	0.2	24.0	30	19,510	0.8

* Does not include Abandoned or Reclaimed Roads

Attachment LY-1: Composition of current (January 2018) lynx habitat data, using the HCP lynx habitat definitions, on LMAs in the HCP project area

2012 HCP BASELINE DATA - DNRC LANDS in the HCP Project Area												
Habitat Class	Proposed LMA's (Land Office)											
	Stillwater West (NW)		Stillwater East (NW)		Coal Creek (NW)		Swan (NW)		Seeley Lake Area (SW)		Garnet Area (SW)	
Winter Foraging Habitat	20,330	57%	24,322	71%	6,410	49%	21,981	60%	1,724	38%	1,079	30%
Summer Foraging Habitat	6,478	18%	2,608	8%	1,934	15%	4,930	14%	265	6%	255	7%
Other Suitable Habitat	4,066	11%	2,627	8%	862	7%	3,441	9%	688	15%	1,847	51%
Suitable Habitat Subtotal	30,874	87%	29,557	86%	9,206	70%	30,352	83%	2,677	59%	3,181	87%
Temporary Non-Suitable Habitat	4,566	13%	4,903	14%	3,962	30%	6,080	17%	1,854	41%	462	13%
Total Potential Lynx Habitat	35,440	92%	34,460	94%	13,168	86%	36,432	92%	4,531	46%	3,643	49%
Non-Habitat	3,167	8%	2,226	6%	2,070	14%	6,224	16%	5,396	54%	3,863	51%
DNRC Total Acres	38,606	100%	36,686	100%	15,238	100%	39,657	100%	9,928	100%	7,507	100%

2017 HCP Annual Report - DNRC Lands in the HCP Project Area												
Habitat Class	Proposed LMA's (Land Office)											
	Stillwater West (NW)		Stillwater East (NW)		Coal Creek (NW)		Swan (NW)		Seeley Lake Area (SW)		Garnet Area (SW)	
Winter Foraging Habitat	17,505	50%	21,136	62%	5,805	44%	18,498	51%	1,865	42%	1,235	35%
Summer Foraging Habitat	10,113	29%	5,921	17%	2,180	17%	4,817	13%	187	4%	219	6%
Other Suitable Habitat	3,540	10%	3,057	9%	1,677	13%	3,899	11%	806	18%	1,532	43%
Suitable Habitat Subtotal	31,158	89%	30,114	89%	9,662	74%	27,214	75%	2,858	64%	2,986	84%
Temporary Non-Suitable Habitat	3,771	11%	3,913	11%	3,402	26%	8,937	25%	1,581	36%	588	16%
Total Potential Lynx Habitat	34,929	91%	34,027	93%	13,064	86%	36,151	91%	4,439	45%	3,574	48%
Non-Habitat	3,644	9%	2,628	7%	2,166	14%	3,503	9%	5,480	55%	3,943	52%
DNRC Total Acres	38,573	100%	36,655	100%	15,230	100%	39,654	100%	9,919	100%	7,517	100%

Attachment LY-2: Acres of existing lynx habitat on Non-LMA parcels, using HCP lynx habitat definitions, on DNRC lands by Land Office in the HCP Project Area

2012 HCP BASELINE DATA- DNRC Lands in the HCP Project Area							
Habitat Class	HCP Project Area (%)						
	NWLO		SWLO		CLO		Total
Winter Foraging Habitat	44,859	69%	11,101	44%	N/A	N/A	55,960
Summer Foraging Habitat	4,580	7%	3,110	12%	3,078	8%	10,768
Other Suitable Habitat	8,515	13%	6,267	25%	22,862	60%	37,644
Suitable Habitat Subtotal	57,954	89%	20,478	82%	25,940	69%	104,372
Temporary Non-Suitable Habitat	7,519	11%	4,643	18%	11,901	31%	24,063
Total Potential Lynx Habitat	65,473	47%	25,121	18%	37,841	34%	128,435
Non-Habitat	74,694	53%	118,423	82%	74,874	66%	267,991
Total Acres	140,167	100%	143,544	100%	112,714	100%	396,425

2017 HCP ANNUAL REPORT- DNRC Lands in the HCP Project Area							
Habitat Class	HCP Project Area (%)						
	NWLO		SWLO		CLO		Total
Winter Foraging Habitat	38,195	58%	11,424	46%	N/A	N/A	49,619
Summer Foraging Habitat	5,034	8%	2,258	9%	2,781	8%	10,073
Other Suitable Habitat	12,423	19%	6,156	25%	24,521	71%	43,100
Suitable Habitat Subtotal	55,652	85%	19,838	80%	27,302	79%	102,792
Temporary Non-Suitable Habitat	9,648	15%	4,969	20%	7,455	21%	22,072
Total Potential Lynx Habitat	65,300	47%	24,807	18%	34,757	31%	124,864
Non-Habitat	74,940	53%	114,465	82%	78,495	69%	267,900
Total Acres*	140,240	100%	139,272	100%	113,252	100%	392,764
Total, 2012 Baseline Data	140,167	100%	143,544	100%	112,714	100%	396,425

**Attachment SD-1: Road Activities Included in DNRC Timber Sale Contracts Sold
between 2012 and 2017**

2017 HCP ANNUAL REPORT - DNRC LANDS IN THE HCP PROJECT AREA							
Road Activity	HCP PROJECT AREA ROAD ACTIVITIES (MILES) BY REPORTING PERIOD						
	2012	2013	2014	2015	2016	2017	Total Road Activities
Permanent Road Construction	15.7	25.6	23.0	27.2	26.00	23.70	141.2
Temporary Road Construction	5.3	10.9	9.3	6.0	9.2	10.5	51.2
Road Reclamation	4.3	4.6	1.9	0.2	0	0	11.0
Road Abandonment	0.0	0.0	1.0	1.7	0.1	0	2.8
Road Reconstruction	10.8	11.1	11.3	19.7	16.6	6.6	76.1
BMP Maintenance	120.2	111.3	204.6	177.9	176.3	199.8	990.1
Total Road Activities	156.3	163.5	251.1	232.7	228.2	240.6	1,272.4

Attachment AQ-GZ: Annual Summary Statistics of Grazing Inspections, Verifications and Implemented Corrective Actions

Calander Year	Midterm Evals	Renewal Evals	Total Evaluations	HCP Parcels	% HCP	Supporting HCP Fishery?	% HCP Fishery	Verification Completed	% Verification	Corrective Action Implemented	Cumulative Corrective Actions
2012	19	81	100	83	83%	30	36%	12	12%	4	4
2013	63	60	123	98	80%	24	24%	10	8%	1	5
2014	33	25	58	39	67%	13	33%	3	5%	4	9
2015	17	26	43	27	63%	7	26%	3	7%	1	10
2016	42	62	104	76	73%	13	17%	2	2%	0	10
2017	55	28	83	65	78%	16	25%	4	5%	0	10
Summary	174	254	428	323	73%	87	27%	30	7%	10	10